

Technology, fabrication and industrialization of embedded systems



ECTS
5 crédits



Hourly volume
66h

Introducing

Objectives

General objectives: this UF addresses the integration, characterization and certification aspects of electronic systems. The students approach the various technologies of manufacturing and assembly of electronic systems, by addressing the tools of specification and industrial design (Electronic Computer-Aided Design). In addition, aspects of design methods and standards / conformities for the economical marketing of an electronic product are addressed. As the power components are subject to strong voltage and thermal constraints, issues of reliability and robustness are also addressed. Finally, the characterization aspects of various energy-related performance in electronic systems are dealt with impedance adaptation for optimal transfer of power to an antenna, EMC and ESD characterization, measurement of energy consumption.

This UF is deliberately based on an industrial approach and is carried out around the design of an electronic card prototype in an industrial workshop and then its characterization.

- Integrate an electronic system
- Design an e-card, under integration, energy, EMC, thermal constraints, etc.
- Reliability and robustness of the new power components
- Measure the performance of an electronic system

(energy consumption, efficiency, CEM, impedance matching)

- Specify and carry out the certification process of an electronic system

Practical info

Location(s)

 Toulouse